UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,590	04/02/2004	Linda Zhong	M109US-GEN2	4928

24272 7590 11/25/2005

Gregory J. Koerner
Redwood Patent Law
1291 East Hillsdale Boulevard
Suite 205
Foster City, CA 94404

EXAMINER	
HA, NGUYEN T	

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/817,590	ZHONG ET AL.	
	Examiner	Art Unit	
	Nguyen T. Ha	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-81* is/are pending in the application.

4a) Of the above claim(s) *31-81* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,16,17 and 23-30* is/are rejected.

7)☒ Claim(s) *9-15 and 18-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0404 and 0305*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-30 in the reply filed on 9/12/2005 is acknowledged. The traversal is on the ground(s) that the search would be co-extensive. This is not found persuasive because the claims 31-81 would be require a further search.

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract is not in the range of 50 to 150 words.

3. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claim 12 is objected to because of the following informalities: Claim 12, line 2

"though" should be - - through - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8, 16-17, 23-24 and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Chickering, III et al. (US 6,918,991).

Regarding claim 1, Chickering, III et al. disclose a process for manufacturing an electrode for use in an energy storage device product, the process comprising the steps of:

- supplying dry carbon particles (column 24, lines 1-2);
- supplying dry binder (column 23, lines 63-67);
- dry mixing the dry carbon particles and dry binder; and
- dry fibrillizing the dry binder to create a matrix within which to support the dry carbon particles as a dry material (column 24, lines 3-7).

Regarding claim 2, Chickering et al. disclose the step of dry fibrilizing comprises application of sufficiently high-shear (figure 1).

Regarding claim 3, Chickering et al. disclose the high shear is applied in a jet-mill (figure 1).

Regarding claim 4, Chickering et al. disclose the application of sufficiently high-shear is effectuated by application of a high pressure (figure 1).

Regarding claims 5-8, Chickering et al. disclose the high pressure is applied as a high-pressure gas (figure 1).

Regarding claims 16-17, Chickering et al. disclose the dry material is manufactured without the substantial use of any processing additives in claims 17 (column 5, lines 20-36).

Regarding claim 23, Chickering et al. disclose the dry binder comprises a fibrillizable flouropolymer (column 16, lines 66-67 and column 17, lines 1-3).

Regarding claim 24, Chickering et al. disclose the dry material consists of dry carbon particles and the dry binder (column 24, lines 3-7).

Regarding claims 29-30, Chickering et al. disclose a method of manufacturing an electrode, comprising the steps of: mixing dry carbon and dry binder particles (column 24, lines 3-7), and forming a self-supporting film from the dry particles without the use of any processing additives (column 5, lines 20-36).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chickering, III et al. (US 6,918,991).

Regarding claims 25 & 26, Chickering et al. disclose all the limitations discussed above with respect to claim 1, except for the dry material comprises between about 50% to 99% activated carbon, or about 0% to 25% conductive carbon. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a dry material comprises between about 50% to 99% activated carbon, or about 0% to 25% conductive carbon, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Regarding claim 27, Chickering et al. disclose all the limitations discussed above with respect to claim 1, except for wherein the dry material comprises between about 0.5% to 20% fluoropolymer particles. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a dry material comprises

between about 0.5% to 20% fluoropolymer particles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Regarding claim 28, Chickering et al. disclose all the limitations discussed above with respect to claim 1, except for the dry material comprises between about 80% to 95% activated carbon and between about 0% to 15% conductive carbon, and wherein the dry binder comprises between about 3% to 15 % fluoropolymer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a dry material comprises between about 80% to 95% activated carbon and between about 0% to 15% conductive carbon, and wherein the dry binder comprises between about 3% to 15 % fluoropolymer, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Allowable Subject Matter

9. Claims 9-15 and 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 9-15, the prior art alone or in combination does not teach the limitation of a process for manufacturing an electrode for use in an energy storage device product further comprising a step of compacting the dry material.

With respect to claims 18-22, the prior art alone or in combination does not teach the limitation of a process for manufacturing an electrode for use in an energy storage device product further comprising a step of calendaring the dry material onto a substrate.

Citation Relevant of Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Nanjundiah et al. (US 6,627,252) disclose an electrochemical double layer capacitor having carbon powder electrodes.

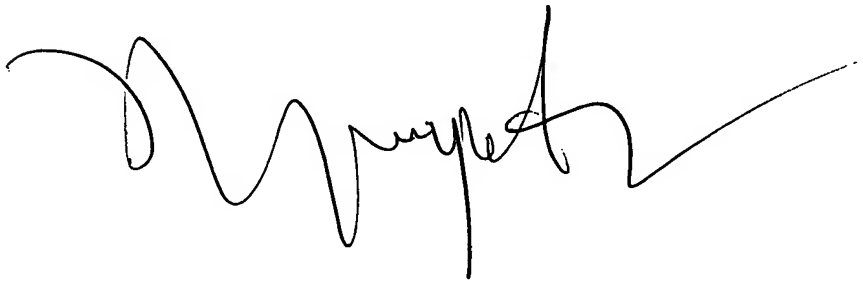
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Ha whose telephone number is 571-272-1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nguyen T. Ha
November 22, 2005